



US006019789A

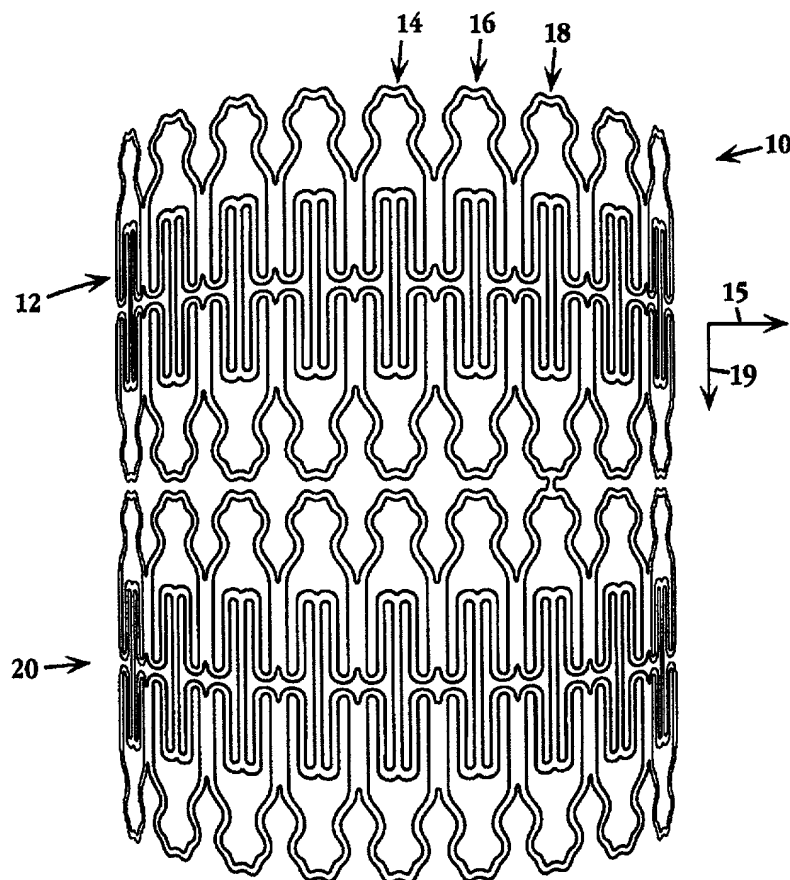
**United States Patent** [19][11] **Patent Number:** **6,019,789****Dinh et al.**[45] **Date of Patent:** **Feb. 1, 2000**[54] **EXPANDABLE UNIT CELL AND  
INTRALUMINAL STENT**[75] **Inventors:** **Linh A. Dinh**, Santa Clara; **Loc X. Phan**, San Jose; **Robert Eury**,  
Cupertino; **Irina Pomerantseva**,  
**Michael Froix**, both of Mountain View,  
all of Calif.[73] **Assignee:** **Quanam Medical Corporation**, Santa  
Clara, Calif.[21] **Appl. No.:** **09/053,887**[22] **Filed:** **Apr. 1, 1998**[51] **Int. Cl.<sup>7</sup>** ..... **A61F 2/06**[52] **U.S. Cl.** ..... **623/1**[58] **Field of Search** ..... **623/1, 11, 12**[56] **References Cited****U.S. PATENT DOCUMENTS**

4,739,762	4/1988	Palmaz .
5,195,984	3/1993	Schatz .
5,342,348	8/1994	Kaplan .
5,354,309	10/1994	Schnepp-Pesch et al. .

5,395,390	3/1995	Simon et al. .	
5,514,154	5/1996	Lau et al. .	
5,569,295	10/1996	Lam .	
5,591,197	1/1997	Orth et al. .	
5,593,442	1/1997	Klein .....	623/12
5,601,593	2/1997	Freitag .	
5,603,721	2/1997	Lau et al. .	
5,637,113	6/1997	Tartaglia et al. .	
5,649,952	7/1997	Lam .	
5,674,242	10/1997	Phan .....	606/198
5,674,278	10/1997	Boneau .	
5,755,776	5/1998	Al-Saadon .....	623/12
B1 4,733,665	1/1994	Palmaz .	

**Primary Examiner**—Michael J. Milano**Attorney, Agent, or Firm**—Judy M. Mohr; Peter J.  
Dehlinger; Dehlinger & Associates[57] **ABSTRACT**

A unit cell for use in a medical device, such as a stent, is disclosed along with a description of a stent formed from a plurality of unit cells and for use in the treatment of restenosis or other vascular narrowing. The unit cell is designed and configured for uniform radial expansion with minimal axial shortening and recoil, and is selectively variable in flexibility and expendability.

**15 Claims, 14 Drawing Sheets**

EL813908887US